

What Defines the University Choice? The Case of Higher Education in Kyrgyzstan¹

Seyil NAJİMUDİNOVA (<https://orcid.org/0000-0003-3848-6635>), Kyrgyz-Turkish Manas University, Kyrgyzstan; seyil.najimudinova@manas.edu.kg

Rita İSMAILOVA (<https://orcid.org/0000-0003-0308-2315>), Kyrgyz-Turkish Manas University, Kyrgyzstan; rita.ismailova@manas.edu.kg

Zamira OSKONBAEVA (<https://orcid.org/0000-0002-3711-6918>), Kyrgyz-Turkish Manas University, Kyrgyzstan; zamira.oskonbaeva@manas.edu.kg

Üniversite Tercihinin Belirleyenleri Nelerdir? Kırgızistan Yükseköğretim Örneği²

Abstract

This study analysed the effectiveness of university promotion methods and factors affecting applicants' choices. The study used a quantitative approach with a sample of 7839 university applicants. Results show that the most influential factor affecting university choice is the economic factors such as tuition fees, scholarships, etc.; nevertheless, family income is not among them. Education quality and academic staff also affect the choice. Besides, there were differences in the factors such as gender, region, family structure and secondary school background of the applicants.

Keywords : Marketing Higher Education, Decision-Making, Information Source, University Choice, Kyrgyzstan.

JEL Classification Codes : M3, I23, P46.

Öz

Bu çalışmada, üniversite tanıtım yöntemlerinin etkinliği ve öğrenci adaylarının tercihlerini etkileyen faktörler araştırılmaktadır. Araştırma nicel yöntemler yardımıyla 7839 üniversite adayı üzerinde yürütülmüştür. Sonuçlar, üniversite tercihinde en etkili faktörün öğrenim ücretleri, burs vb. ekonomik faktörler olduğunu; ancak, aile gelirinin bu faktörler arasında olmadığını ortaya koymuştur. Eğitim kalitesi ve akademik kadronun da üniversite tercihinde önemli olduğu anlaşılmaktadır. Ayrıca öğrenci adaylarının cinsiyet, bölge, aile yapısı ve mezun olduğu ortaokul türü gibi faktörlerde de farklılıklar tespit edilmiştir.

Anahtar Sözcükler : Yükseköğretim Pazarlaması, Karar Verme, Bilgi Kaynağı, Üniversite Seçimi, Kırgızistan.

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1. Introduction

Nowadays, higher education institutions (HEI) are important for applicants who try to make the right choice affecting their future and for universities that try to attract applicants in a highly competitive environment. It is continuously emphasised that analysing the image of universities is central to identifying the necessary attributes for HEIs' sustainability in this competitive environment (Pampaloni, 2010; Manzoor et al., 2020). In such a dynamic environment, applicants are now mindfully approaching HEI choice; however, it is a notably sophisticated process for them, as there are many options (Aydin, 2015).

HEIs are faced with the necessity of positioning in the increasingly competitive market and the challenge of finding eligible students (Obermeit, 2012). Therefore, universities inevitably have to consider applicants from a marketing view. Discussions about university marketing started with the emergence of private universities. Marketing was not always vital since there was a strong demand for universities, so schools were not forced to compete for a more significant number of student candidates. Only in the 2010s, the first problems in the university market were caused essentially by the situation when employers' demand for university graduates gradually decreased (Białoń, 2015). As Guilbault (2016) discussed that even though marketing in higher education is well recognised, there is an ongoing dispute on who the customer is, with many still not accepting that students might be viewed as customers and suggesting instead of continuing to reject those students are customers, to explore how to react to students as customers.

To react to higher competition universities, develop and implement enrolment management strategies to influence the size and characteristics of the students' structure. As a result, marketing is perceived as the primary function in universities, helping them get more prospective applicants (Rika et al., 2016). In this context, it is important to understand how the young generation chooses a university and what factors affect their choice.

Today in Kyrgyzstan, with a 6.4 million population, more than 160 thousand students are carrying on their studies in 73 HEIs, of which 40 are public (Ministry of Education and Science, 2021). On the other hand, approximately 50,000 students graduate from secondary education every year and become university applicants. Consequently, the increasing competition in HEIs requires Kyrgyzstani universities to design and reconsider their customer-oriented marketing strategies according to the factors affecting applicants' university choices. They especially need to pay attention to comprehend their future students' motives. However, in the study, we do not consider the tuition issue as it concerns the choice of a public university, so there are no tuition fee concerns that could affect the applicants' choice.

Therefore, to develop effective marketing strategies and to know their target group, the university administration should comprehend students' university choice reasons and paths.

Moving from these considerations, this study aims to determine what factors affect an applicant's university choice in Kyrgyzstan, Central Asia. The research findings will enable HEIs to use their resources better, improve their marketing activities, and use marketing budgets effectively (Rika et al., 2016). The data on the factors driving students' HEIs choices is important for all stakeholders like universities, government, policymakers, academicians and researchers, students, and their families in their decision-making process.

The study is organised as follows: In Section 2, related works were reviewed; in Section 3, we present the research questions. Results are given in Section 4, Section 5 covers discussions of the results, and Section 6 concludes the research outputs.

2. Related Literature

The factors affecting university choice have drawn attention all over the world. Related studies are conducted by academicians from different parts of the world. Previous studies have focused more on factors affecting the university choice of enrolled bachelor students or graduates (Lindblom-Ylänne et al., 1999; Adams & Hancock, 2000; Fraser & Killen, 2003; Manoku, 2015, van der Zanden et al., 2018, Azzone & Soncin, 2019, Manzoor, 2020). Aydın (2015) explained the university choice decision by four different models: economic, sociological, mixed, and marketing approach models. Next, the author introduced the nine main factors (reference groups, families, reputation and attributes of universities, personal characteristics, location, postgraduate job prospects, university fees, financial aid/scholarship, and information sources) that impact applicants' choices.

In the study conducted by Kallio (1995) in the USA, the factors affecting university preferences include the academic reputation of the institution, the quality, and other educational environment determinants, work-related issues, the quality and size of the program, tuition fees, financial assistance, geographic location, and campus social environment. Obermeit (2012) emphasised the complexity of the decision-making processes of freshmen and identified reputation, financial considerations, location, curriculum, others' advice, information sources, publications, social networks, campus visits, and rankings as relevant factors in applicants' university choice in Germany. Drewes and Michael's (2006) survey of 27,981 Canadian applicants showed that they consider proximity, scholarships and teaching, and level of non-academic student services. Raposo and Alves (2007) identified factors affecting university choice of 1024 surveyed students in Portugal as the reputation of the institution (education quality, quality of academic staff, the modernity of facilities and equipment, campus social life, etc.), educational offer (courses variety, the existence of actualised courses, employment opportunities, etc.), previous information about the institution, individual factors (geographic location, proximity to the family, tuition fees, friends and relatives), the influence of others (advice of parents, teachers at secondary school and friends). As Misran et al. (2012) showed, in Malaysia, the factors influencing the university and significant choice were personality fit, family and intimate environment influence, cost of study and financial support, good reputation of the university, university proximity to parents, physical facilities, and quality of academicians. Besides, career

opportunities, interests, expected salaries, and competent academicians were the reasons for the significant choice. On the other side, Manzoor et al. (2020) stated external communication and values, university ranking and reputation, tuition fee, and the cost-to-quality ratio constitute university image from the perspective of international students in Malaysia.

In a study conducted by Manoku in 10 Albanian universities in 2015 (1532 students), nine main factors were: cost of education and living expenses during education, quality of academic and administrative staff, institutional reputation, placement, and physical environment, accreditation status, individual preferences and abilities, placement of the academic unit to provide education, post-graduation facilities, general academic grade point average in high school were found to influence university preferences. Çatı et al. (2016) analysis on 1112 students across seven provinces in Turkey showed that factors affecting the university choice were: the reputation and image of the university, access to information, campus characteristics and location, sociality (sports facilities, student clubs, social facilities, the status of the university (state or private). Wilkins et al. (2018) showed that knowledge and skills play a vital role in decision-making in the UAE and China. Kalimullin and Dobrotvorskaya (2016) found that in Russia, dominant factors affecting the university choice were the high-quality faculties availability, the reputation of the university, the availability of a particular academic program, recommendations of friends or relatives, parents' requests, media coverage, infrastructure and facilities, education cost and low tuition fees.

One main factor that affects university choice is the university's information. Dao and Thorpe (2015) found several important factors when choosing a university in their research based on the views of students and graduates of Vietnamese universities. These factors include facilities (services and communications), university programs, and information about the university (offline and online).

Simões and Soares (2010), based on survey data conducted on 1641 students at a Portuguese university, explored the information sources and choice factors. The findings revealed that most respondents rated the university website among the three most used information sources, and geographical proximity is the most crucial choice factor among others. Sá et al. (2011) investigated the HEI choice type using individual-level data on first-year students in Portugal employing a bivariate probit model. Results revealed gender and proximity differences in the style of HEI choice. Also, income increase results in a willingness to get higher education (HE). Parental education also impacted student choices: parents holding a HE diploma were more likely to choose a university. Thus, a high cultural and socioeconomic background was associated with a higher probability of choosing a university education. Le et al. (2019) investigated the choice factors in Vietnam. The results indicated that future job prospects, teaching quality, staff expertise, and course content were important choice factors. Also, parents were the most influential information source for Vietnamese students.

Sianou-Kyrgiou and Tsiplakides (2011) examined the students' higher education choices with different socioeconomic backgrounds but similar performance levels in Greece. The findings prove that HE choice is a different experience for middle-class and working-class students: middle-class students tend to study in more prestigious university departments than working-class students. The authors argue that choice is a multifaceted process, the analysis of which needs to consider the general financial and societal context and the specific labour market characteristics in each country. Briggs (2006) found three main factors affecting Scottish students' decisions: academic reputation, proximity, and geographic location. In Veloutsou et al. (2004) research, information ranking was revealed as one of the factors influencing university selection. Based on the survey results conducted in the UK, Maringe (2006) emphasised that there was a consumerist approach to choosing a university. Thus, applicants pay more attention to career prospects rather than subject interest. Azzone and Soncin (2019) analysed students' choice factors from a survey of 27,504 students across 23 Italian institutions. They found multiple factors influencing students' choices: geographical proximity, regional career opportunities, reputation and ease of access.

Based on a survey of 518 students in Kurdistan-Iraq, Qasim et al. (2020) found that reputation/accreditation, quality of teaching, employability, and facility quality influenced student choices more than anything else.

A review showed that a few studies were conducted in the Central Asian region. For example, the survey by Jonbekova (2020) investigated the purpose of university education in Kazakhstan and Tajikistan from the student's point of view based on the responses of 172 undergraduate students. The author highlighted the socio-economic pressures; students' primary motivation was enhanced access to employment opportunities. Another study in Kyrgyzstan by Momunaliyeva et al. (2020) examined the perceived quality of education rather than the decision of the student's university choice. However, no comprehensive research on university marketing strategies was carried out. Thus, this study contributes to the current literature on university choice factors in three dimensions. Firstly, a considerable amount of literature has been published on the case of developed countries like the USA, Germany, Italy, the UK, Turkey, and Portugal. The current study will show research findings in the case of a lower middle-income country like Kyrgyzstan, Central Asia. Secondly, a significant part of the findings in related literature is based on data collected from students already enrolled in HE institutions, not applicants or enrollees who have not made the final decision. Thirdly, as the results of the current research show, there is a slight difference in the factors influencing decision-making in university choice. As there is an increase in student mobility, the study's results contribute to understanding the motives of youth in developing countries in the case of Kyrgyzstan. In addition, Kyrgyzstan is a country where most people are bilinguals (speaking both Kyrgyz and Russian). Thus, secondary schools also differ in the language of instruction (LoI). The problem of deficiency of textbooks in Kyrgyz affects the educational process crucially. In the study, the impact of the LoI and the type of secondary schools were also examined, contributing to the field.

3. Methodology

3.1. Research Questions

As the literature review showed, there are many factors affecting university choice. In the competitive market of HE, it is important to promote universities and define factors that may influence the decision of applicants to attract students. Therefore, the study aimed to determine information sources that help introduce HEI. In addition, it sought to define factors influencing applicants' decision to choose a particular university. During the decision-making process, applicants as consumers can turn to various resources to pick necessary information about the product or service, i.e., HEI under consideration. Information sources are found as influential factors in the choice process. Are there any significant differences between the most used information source and applicants' gender (Simões & Soares, 2010), region of residence (Obermeit, 2012), family characteristics (Constantinescu-Dobra & Coțiu, 2017) and income (Shumow et al., 1996), and secondary school type? Simões & Soares (2010) found that female and male applicants tended to refer to similar information sources when applying to an HEI.

Therefore, the following research questions are posed:

RQ1 Does a university information source affect applicants' choice?

RQ1a Does it depend on gender?

RQ1b Does it depend on the region of residence?

RQ1c Does it depend on family characteristics?

RQ1d Does it depend on secondary school types?

Another critical question is why applicants' choice fell on this particular university. Many types of research have been carried out to determine the difference between the choice of male and female applicants (López-Bonilla et al., 2012; Engin & McKeown, 2016; Mustafa et al., 2018) and its impact on the region (Aydın, 2015; Ghansah et al., 2016). Also, parents' involvement in students' choices was studied by David et al. (2003), showing that mothers are generally more involved. Therefore, the question arises of the difference in the choice of applicants with different family structures.

RQ2 Why did applicants choose this particular university?

RQ2a Does the choice of male and female applicants differ?

RQ2b Does the choice of applicants from different regions differ?

RQ2c Does the choice of applicants from families with different characteristics differ?

RQ2d Does the choice of applicants from different types of secondary schools differ?

3.2. Materials and Procedure

The target group of this study is university applicants. In four years, from 2015 to 2018, 7839 responses were collected. The survey was conducted in a paper-based form after an entrance examination and was entirely voluntarily. Collected responses were further converted into a machine-readable format. For this study, answers for these four years were filled into an SPSS file. The results showed that most university applicants are 17-18 age-old-85% of respondents belong to this age group. Traditionally, Kyrgyz families have many children; according to applicants' responses, 51.92% have 4 or more siblings, while 38% have 2 or 3 siblings. Almost one-third of all applicants-31.43%-are from the Bishkek and Chuy region, where the university is located³. 33.66% of respondents were from the northern areas of Kyrgyzstan that are geographically closer to Bishkek and, thus, to the university. Southern regions of the country that proximity is farther represented by 34.91% of respondents.

Applicants are represented mainly by graduates of general-education secondary schools -65% of all applicants. Besides, about 15% of applicants are from lyceums and gymnasium type of schools. Colleges and vocational schools are represented by less than 6% of applicants.

3.3. Factor Analysis

Questions on the effect of information sources and reasons for choosing this particular university in the questionnaire allowed multiple responses. Since there were many items in these questions, a principal component factor analysis was carried out.

How did you learn about the university?

On the question of what promotion activities carried out by the university had an impact on the choice of the university, there were 12 items. To reduce the dimension, the factor analysis was carried out. The construct resulted in eight distinct factors with factor loadings for all variables greater than 0.302. According to the results of the factor analysis, there are five main factors:

- Reference group: friends, family members and graduates,
- Secondary school teachers,
- Media: TV, newspapers, radio and social media,
- University marketing activities: vocational guidance activities, charity activities, visiting the campus,
- Advertisement: Billboards, advertisements, and occasionally.

³ Bishkek city and the Chuy region were combined since the capital city of Kyrgyzstan, Bishkek, is located in the Chuy region.

The cumulative percentage of variances explained by these five factors is 62.827.

Why did you choose this university?

On the 18 items asked to determine factors that influence the choice of this particular university, the factor analysis resulted in five distinct factors. Factor loadings for variables were in the range of .225 to .914. Based on the items, these factors were described as:

- Economic factors (includes variables: no tuition fee, learning a foreign language, scholarship, dormitory and nutrition, work opportunities abroad and career opportunities),
- Reputational factors (prestige, reputation, career expectations),
- Recommendations (of friends, family members, and other advisers),
- Quality of education and academic staff,
- The university's infrastructure (attractiveness, infrastructure, secure environment).

The cumulative percentage of variances explained by factors is 60.136.

4. Results

4.1. How Applicants Learned About the University

The first analysis of the effectiveness of university information sources showed that primarily young people learn about universities from friends, including those who are currently studying at the university or have already graduated: the mean of the "Reference group" variable was .4759, implying that almost the half of the applicants indicated peers as the primary source of information about the university. The second and the third most common ways to learn about the university were media (TV, radio and newspapers) and internet (including social media), and university marketing strategies such as vocational guidance activities, charity activities, and organisation of open days for visiting campus (Table 1).

Table: 1
Mean Differences Tests Results on How Applicants Were Informed About the University by Gender, Region and Family Structure

Factors	Mean	Mean difference by gender		Mean difference by region		Mean difference by family structure	
		$\mu_{male} - \mu_{female}$	Sig.	I-J	Sig.	I-J	Sig.
The reference group (friend and family)	.4759	-.03454	.015	$\mu_{South} - \mu_{Center} = .07355$	.000	$\mu_{both} - \mu_{no\ mother} = -.12772$	.002
Media	.1658	-.02602	.007	$\mu_{South} - \mu_{North} = .07659$	.000	$\mu_{divorced} - \mu_{no\ mother} = -.13707$	.006
University marketing activities	.1150	.01791	.040		.070	$\mu_{no\ father} - \mu_{no\ mother} = -.14448$	.003
Teachers	.0735	.02511	.000	$\mu_{center} - \mu_{South} = .07401$	.000	$\mu_{both} - \mu_{no\ mother} = -.07095$	.029
University adv.	.0349	.00458	.333	$\mu_{North} - \mu_{South} = .05251$	.000	$\mu_{both} - \mu_{no\ mother} = -.07053$	.006

Gender

The dependence of university promotion ways on the demographic characteristics of applicants showed that the male and female applicants pay attention to different sources of information. This difference was statistically significant except for the university advertisement activities. According to the test results, male applicants stated they had learned about the university from secondary school teachers and university marketing strategies. In contrast, female applicants gather information about the particular university mostly from family and friends, TV, Radio, and social media (Table 1).

Region of Residence

The university location plays a significant role in promotion activities since it is not always possible to reach applicants due to geographical location. Therefore, in this section, the ANOVA test was conducted to see if the university promotion means are effective in different regions. The division was only due to geographical distance to the university's location, and areas were symbolically encoded as southern, central, and northern parts of Kyrgyzstan.

According to the results, applicants from the south part of the country learned about the university mostly from family, friends, graduates, and teachers: the difference for the "reference group" was statistically significant between the responses of applicants from the south and central part, and south and north parts of the country (Table 1).

As for the "teachers", the difference was statistically significant between applicants who graduated from secondary schools in the south and central parts of the country. Besides, the university promotion activities are most effective for the applicants from central and north regions. Media and university advertisements reached all areas at the same level-no statistically significant difference at a 95% confidence interval was observed in the responses of applicants.

Family Background

To see the effectiveness of university promotion in families with different backgrounds, the ANOVA was carried out in three dimensions: the family structure, the number of siblings, and family income.

According to the results of the first analysis on how applicants were informed about the university, applicants with no mothers indicated a reference group as a source of information more often than others. In addition, a difference was observed in responses related to learning about the university from media: applicants from complete families indicated media, university marketing strategies, and advertisement less as a source of information about the university than those with no mother (Table 1).

The number of siblings played a role in cases where applicants had four and more siblings: they tend to indicate their reference group as the source where they had learned about the university, and the difference was statistically significant in responses of those who had two siblings and those who had four and more siblings. In addition, they paid less attention to university marketing activities and advertisements.

Family income was also indicated as one of the factors defining acquaintance with universities (Sedahmed & Noureldien, 2019); however, according to the current study, no difference was observed in this factor among representatives of different income groups.

Type of School

In Kyrgyzstan, several types of secondary schools can award a diploma of secondary school grade. These schools are the general-education secondary schools, gymnasiums, lyceum-type schools, and vocational secondary schools and colleges. ANOVA was carried out to see if the distribution of information about the university depends on the type of secondary school that students graduated from.

According to the analysis results, the source where applicants get information about the university differs depending on the type of school. Thus, applicants who graduated from vocational schools get information from the reference group more often than from other schools. Teachers in vocational schools and lyceum types of schools were also a source of information more often than in general-education secondary schools and gymnasiums. The same can be said about university marketing strategies (Table 2).

Table: 2
ANOVA on How Applicants Were Informed About the University by Type of Secondary Schools and Language on Instructions at Secondary Schools They Graduated From

Factors	Type of secondary school		Language on instructions at secondary school	
	Mean Difference (I-J)	Sig.	Mean Difference (I-J)	Sig.
Reference group	$\mu_{vc.sch.} - \mu_{gen.sch.} = .105^*$	.001	$\mu_{kg} - \mu_{ru} = .078$	.000
	$\mu_{vc.sch.} - \mu_{gym.} = .125^*$	.000	$\mu_{kg} - \mu_{tr} = .205$	.001
	$\mu_{vc.sch.} - \mu_{lyc.} = .110^*$	.003		
Media			$\mu_{kg} - \mu_{tr} = .105$	.037
	$\mu_{gen.sch.} - \mu_{lyc.} = .039^*$	.018	$\mu_{ru} - \mu_{tr} = .131$	.005
			$\mu_{kg} - \mu_{en} = .101$	.023
University marketing activities	$\mu_{lyc.} - \mu_{gen.sch.} = .085^*$	.000	$\mu_{ru} - \mu_{kg} = .025$	.032
	$\mu_{lyc.} - \mu_{gym.} = .071^*$	.000	$\mu_{tr} - \mu_{kg} = .150$	.000
	$\mu_{vc.sch.} - \mu_{gen.sch.} = .080^*$	.000	$\mu_{en} - \mu_{kg} = .179$	.000
	$\mu_{vc.sch.} - \mu_{gym.} = .065^*$	.005	$\mu_{tr} - \mu_{ru} = .125$	.001
			$\mu_{en} - \mu_{ru} = .154$	.000
Teachers	$\mu_{lyc.} - \mu_{gen.sch.} = .099^*$	.000	$\mu_{tr} - \mu_{kg} = .207$	.000
	$\mu_{lyc.} - \mu_{gym.} = .105^*$	.000	$\mu_{en} - \mu_{kg} = .222$	.000
	$\mu_{vc.sch.} - \mu_{gen.sch.} = .069^*$	.000	$\mu_{tr} - \mu_{ru} = .218$	.000
	$\mu_{vc.sch.} - \mu_{gym.} = .075^*$	.000	$\mu_{en} - \mu_{ru} = .233$	.000
University advertisements		.355	$\mu_{ru} - \mu_{kg} = .017$	.006

Compared to graduates of other types of schools, students from general-education secondary schools indicated media more often as a source where they had learned about the

university. As a final point in this analysis, no statistically significant difference was found in applicants' responses concerning university advertisements.

Unlike many universities in Kyrgyzstan, where education is mainly carried out in the official language of the country-Russian, in the university where the current study was carried out, the languages of instruction are Kyrgyz and Turkish. As for the LoI in secondary schools, classes can be in either Kyrgyz or Russian. In addition, some schools provide education in foreign languages such as English, Turkish, French, Chinese, etc. Therefore, in the following analysis, the distribution of information about the university in schools with different languages of instruction was conducted (Table 2).

According to the analysis results, applicants who graduated from the schools with the Kyrgyz LoI referred to friends and family more often than those who graduated with Russian and Turkish LoI. Moreover, graduates of schools where education is in foreign languages indicated as an information source their teachers more often than others did. In addition, applicants from schools with local (Kyrgyz and Russian) language instruction indicated media as a source more often and university marketing strategies and advertisements in fewer cases than those who study in a foreign language at secondary school.

4.2. University Choice by Demographic Characteristics

Gender

In this section, the dependence of the decision-making while choosing a university was analysed on the demographic background of applicants (Table 3). The frequency count on the factors affecting applicants' choice showed that the two most important factors when choosing the university were economic factors and quality of education and academic staff: the mean of the "economic factors" variable was .6878, and of the "quality of education and academic staff" variable-.6152. These variables are followed by reputational factors ($\mu = .3143$), recommendations ($\mu = .2618$), and the least important infrastructure ($\mu = .1861$).

Table: 3
T-Test on the Reason of Choice by Gender

Factors	Mean	Mean Difference	Sig.
Economic factors	.6878		.725
Quality of education and academic staff	.6152	$\mu_{female} - \mu_{male} = .06698$	.000
Reputational factors	.3143	$\mu_{male} - \mu_{female} = .04003$	.006
Recommendations	.2618	$\mu_{male} - \mu_{female} = .02747$	.022
Infrastructure	.1861		.201

The test whether these factors affect the decision-making, independent samples t-test was conducted. According to the results, male applicants pay more attention to the university's reputation and recommendations than females. A statistically significant difference was also observed in the impact of the quality of education, and academic staff-female students indicated this factor more often than male applicants did. No difference was found in the effects of economic factors (i.e., no tuition fee, learning a foreign language,

scholarship, dormitory and nutrition, work opportunities abroad and career opportunities) were necessary for both male and female applicants; and infrastructure (attractiveness, infrastructure, environment) was the least important factor while choosing a university.

Region of Residence

The ANOVA on the dependence of decision-making factors on the region of residence showed that the quality of education had more impact on the decision of applicants from the northern part of the country. Applicants from central regions indicated the university reputational factors as a factor more often than applicants from southern and northern parts. Yet, the difference was also significant in applicants' responses from these two regions, with youth from the north being more concerned with the university's reputation. Recommendations and university infrastructure were more important for representatives of the southern regions.

Table: 4
ANOVA on Reasons of Choice by Region of Residence

Factors	Mean	Mean Difference (I-J)	Sig.
Economic factors	.6878		.059
Quality of education and academic staff	.6152	$\mu_{North} - \mu_{Center} = .04800$	.004
		$\mu_{North} - \mu_{South} = .04632$	.003
Reputational factors	.3143	$\mu_{Center} - \mu_{North} = .09010$	.000
		$\mu_{Center} - \mu_{South} = .17730$	.000
		$\mu_{North} - \mu_{South} = .08720$	.000
Recommendations	.2618	$\mu_{North} - \mu_{Center} = .05089$	.001
		$\mu_{South} - \mu_{Center} = .08755$	.000
		$\mu_{South} - \mu_{North} = .03666$	.022
Infrastructure	.1861	$\mu_{South} - \mu_{Center} = .05200$	.000
		$\mu_{South} - \mu_{North} = .04436$	.002

As for the economic factors, applicants from all regions indicated them as the most critical factor defining their choice. Table 4 shows the mean differences for the cases where they were statistically significant at a 95% confidence interval.

Family Background

Similar to the analysis of university promotion means, the impact of family background on the choice of applicants was tested in three dimensions: the family structure of applicants, the number of siblings, and family income.

According to the results of the ANOVA on how the family structure impacts applicants' decision to choose a particular university, the applicants who have no mothers indicated the university infrastructure, quality of education and academic staff as main factors more often than applicants from other groups. The difference was also statistically significant in responses of applicants without mothers and those from complete families on the economic factors- the formers indicated economic factors less often (Table 5).

Table: 5
ANOVA on Reasons of Choice by Family Structure and Number of Siblings

Factors	Family structure		Number of siblings	
	Mean Difference (I-J)	Sig.	Mean Difference (I-J)	Sig.
Economic factors	$\mu_{both} - \mu_{no\ mother} = -.192$	.005		.058
Quality of education and academic staff	$\mu_{both} - \mu_{no\ mother} = -.142$	.000		.157
	$\mu_{divorced} - \mu_{no\ mother} = -.159$	.000		
	$\mu_{no\ father} - \mu_{no\ mother} = -.160$	.000		
Reputational factors		.185	$\mu_1 - \mu_2 = .100^*$	.006
			$\mu_1 - \mu_{>4} = .171^*$	.000
			$\mu_2 - \mu_{>4} = .120^*$	.000
			$\mu_3 - \mu_{>4} = .072^*$	.000
Recommendations		.318		.310
Infrastructure	$\mu_{both} - \mu_{no\ mother} = -.133$	.000		.067
	$\mu_{divorced} - \mu_{no\ mother} = -.112$	.003		
	$\mu_{no\ father} - \mu_{no\ mother} = -.138$	.000		

The differences in the impact of university reputation and recommendations were not statistically significant. On the other hand, the importance of the university was a less defining factor for the applicants who came from families with more children.

As for the difference in the impact of the factors on the university choice of applicants with different family incomes, the only statistically significant difference was found in responses of applicants whose income is less than 20000 KGS (about 280 US dollars). That is, applicants whose family income was less stated that the reputational factors were important for choosing this university less often than their peers from other groups. However, this difference was insignificant in the group with income lower than 20000 KGS and higher than 50000 KGS (approximately 700 US dollars).

The impact of economic factors, infrastructure, quality of education and academic staff, reputation and status of the university, and recommendations were similar in all groups of respondents.

Type of School

ANOVA was carried out to see if the choice of university depends on the type of secondary school students graduated from. According to the results, graduates of the general-education secondary schools pay less attention to the economic factors and infrastructure of the university when deciding on graduates of lyceums and vocational schools. In addition, they indicated the university's reputation less often as a factor in choosing the university than their peers who graduated from other types of schools. The difference in the role of infrastructure was also observed in the choice of applicants who graduated from gymnasiums, lyceums, and vocational schools (Table 6).

Table: 6
ANOVA on the Reason of Choice by Type of Secondary Schools and Language on Instructions at Secondary Schools, They Graduated From

Factors	Type of secondary school		Language on instructions at secondary school	
	Mean Difference (I-J)	Sig.	Mean Difference (I-J)	Sig.
Economic factors	$\mu_{tyc.} - \mu_{gensch.} = .117$	.000	$\mu_{ru} - \mu_{kg} = .097$	.001
	$\mu_{vc.sch.} - \mu_{gensch.} = .175$	.001		
Quality of education and academic staff	$\mu_{ord.sch.} - \mu_{gym.} = .067$	.000		.068
	$\mu_{tyc.} - \mu_{gym.} = .080$	.001		
	$\mu_{vc.sch.} - \mu_{gym.} = .100$	.003		
Reputational factors	$\mu_{gym.} - \mu_{gensch.} = .127$	.000	$\mu_{ru} - \mu_{kg} = .149$	.000
	$\mu_{tyc.} - \mu_{gensch.} = .134$	.000	$\mu_{tr} - \mu_{kg} = .186$	.006
	$\mu_{vc.sch.} - \mu_{gensch.} = .138$	.000		
Recommendations		.080	$\mu_{kg} - \mu_{ru} = .058$	.000
Infrastructure	$\mu_{tyc.} - \mu_{gensch.} = .076$	.000	$\mu_{kg} - \mu_{ru} = .048$	.000
	$\mu_{vc.sch.} - \mu_{gensch.} = .116$	.000	$\mu_{en} - \mu_{kg} = .129$	.003
	$\mu_{tyc.} - \mu_{gym.} = .108$	.000	$\mu_{tr} - \mu_{ru} = .123^*$	.021
	$\mu_{vc.sch.} - \mu_{gym.} = .149$	.000	$\mu_{en} - \mu_{ru} = .176^*$	.000

Applicants who came from gymnasiums indicated the quality of education and academic staff working for the university as an important factor less often than others; the differences between this group of applicants and other groups were statistically significant.

The test on the dependence of applicants' choice on the LoIs in the secondary schools showed that economic factors and recommendations for students who studied in Kyrgyz were less critical than those who graduated from secondary schools with the Russian LoIs. The same situation was observed on the "reputational factors" variable. Here, the difference in impact was also found between this group of students and students who attended schools with the Turkish LoI (Table 6).

Graduates of secondary schools with foreign LoIs (Turkish, English, and others) are more inclined to choose universities with better infrastructure. The difference was significant between these groups of applicants and applicants from schools with Kyrgyz and Russian LoIs.

5. Discussions

As Chapleo & O'Sullivan (2017) emphasised that disputes around the marketisation of HE are timely and considerable, and many topics like HE branding, corporate communication, the student voice, and corporate reputation appear at the top levels in universities across the world.

The study results showed five influential sources of information about universities in Kyrgyzstan. Almost half of the applicants learn about universities from their families, friends, and graduates. The second and the third most common ways to learn about the university were media and university marketing strategies such as vocational guidance activities, charity activities, and the organisation of open days for visiting campus. These results go in line with findings obtained in Portugal; both Kyrgyzstani and Portuguese applicants indicated students and graduates as the primary information source about

universities (Simões & Soares, 2010) and obtained from the USA, where American applicants precise their decision-making process after physically visiting a university (Pampaloni, 2010: 38).

In some earlier research, a prospectus was the most influential source of information (Briggs, 2006), followed by open days and websites. Yet, mass media always significantly promoted universities (Liu et al., 2019). Unlike these findings, according to the current study, digital sources and university marketing strategies (including open days and campus visits) served as a source of information to more applicants than advertisements and brochures. As Eger et al. (2020) state that nowadays, most universities are aware of the need for communication with applicants and current students through social networks, and it is no surprise that social network sites represent one of the most common forms of socio-cultural interaction, in particular for the young generation. In support of this, Bonilla et al. (2019) suggested that taking into consideration these trends in changing preferences by applicants, social media administrators must be diligent in communication management and take into account the habits of their target audience, i.e., future students.

As for the factors affecting university choice, the decision-making process among Kyrgyz university applicants was determined by five main factors. Economic factors (no tuition fee, learning a foreign language, scholarship, dormitory and nutrition, employment opportunities abroad and career opportunities), education quality, and academic staff were the most significant when choosing a university. Contradictory, for Kurdistan-Iraq applicants cost of the study, was not seen to be highly influential toward their choice (Qasim et al., 2020). In studies conducted among Italian youth, the economic factors were at the 5th position out of 8 factors. The quality of education was one of the main factors affecting choice in Scotland (Briggs, 2006) and Russia (Kalimullin & Dobrotvorskaya, 2016). The same results were obtained in Vietnam (Le et al., 2019); it is worth mentioning that Vietnam and Kyrgyzstan are at the same income level. Thus, given the middle-low-income level of Kyrgyzstan, the economic factor becomes one of the essential factors influencing applicants' choices. The difference was also in the reputational factors and recommendations, which affected the choice of about 30% of applicants. In contrast, this factor was the second most crucial factor in the Italian context (Azzone & Soncin, 2019). The universities' infrastructure was the least important factor in Kyrgyzstan, with less than 20% of applicants indicating it. According to a study in Vietnam, university facilities and infrastructure were also less critical factors (Le et al., 2019). However, in the case of Russia, this factor was middle-weighted (Kalimullin & Dobrotvorskaya, 2016).

When looking at the gender differences, in the study by Malaysian (Misran et al., 2012) and German (Obermeit, 2012) researchers, gender had to impact on the decision-making factors that affect university choice. On the other hand, in the study by Moogan and Baron (2003) in the UK, the difference was found in male applicants who were introduced to universities by parents more often than female applicants. The current study showed that in Kyrgyzstan, mostly male applicants have learned about the university from teachers and university marketing strategies (vocational guidance activities, charity activities, visiting

campus). In addition, male applicants' decision to choose a particular university was based generally on corporate reputation and recommendations. Although the study's results in Scotland also revealed a difference in university reputation and quality of faculty factors influencing the choice of university, with male applicants being more inclined to these factors, these differences were slightly significant (Briggs, 2006). Moreover, according to this study, female applicants tend to attribute equal importance to factors like male peers. It contradicts the findings by Qasim et al. (2020) obtained in Kurdistan-Iraq, where female students displayed less importance in most of the factors than male students.

Another dimension of the current research was on the residential differences of applicants in terms of information sources and decision-making. Results showed that university promotion was more effective in Kyrgyzstan's central and northern parts. Yet, in southern regions, applicants decide about university choice based on the recommendations; therefore, the marketing strategies in the south can differ from those in central and northern parts of the country by enlarging the reference group.

As for the family structure of applicants, both in the way of learning about the university and in factors that influenced applicants' choice of university, for applicants who had no mother, the impact of economic factors, quality of education and infrastructure was less important. The number of siblings was significant in the influence of reputational factors: there more siblings, the less reputation was important.

As mentioned above, secondary schools in Kyrgyzstan differ by the LoI, and by types. The languages of instruction are mostly Kyrgyz and Russian; however, in the last two decades, schools with foreign languages of instruction emerged. As for the school types, ordered by the difficulty of the programs, they are divided into general-education secondary schools, gymnasiums (that is, schools with some additional classes), lyceum-type schools (i.e., schools with a focus on some disciplines) and vocational secondary schools and colleges (Educational Standards, 2004). In getting information about the university, graduates of vocational schools mainly indicated the reference group (friends, current students, graduates, and family) and teachers. Similar results were presented by Constantinides & Stagno (2011: 21) in the case of the Netherlands; Al-Fattal and Ayoubi (2013: 214-5) in the case of Syria, and Engin and McKeown (2016: 10) in the case of the United Arab Emirates, where they expressed that advises from family (sometimes very insistent) and friends go on playing an essential role in student's choice of university.

In addition, results showed that those who study in schools with Kyrgyz LoI tend to discuss the university with a close reference group (mostly parents), while those who study in schools with foreign LoI indicate teachers more often as a source of information. This implies that youth who study in Kyrgyz schools are more traditional, as Kyrgyz culture is generally built on respect for elders. The same result was true in the case of Vietnamese youth (Le et al., 2019). Graduates of vocational schools and lyceums are more inclined to pay attention to all factors than graduates of public education schools. Thus, their choice is

more conscious. Results showed the same tendency exists in schools with the LoI other than local (Kyrgyz and Russian) languages.

Results of findings on the secondary school type and LoI imply that general-education secondary schools are less effective in further career guidance for their students. In addition, considering the evidence provided by the current study, administration in schools with the Kyrgyz LoI should review their teaching policy and approach, as it further affects the decision-making on the choice of the university among secondary school graduates as well.

6. Conclusion

The choice of university is a very complex and multifactorial process that significantly affects the future of applicants. In Kyrgyzstan, with a 6.4 million population (NSC KR, 2019), there are 62 universities. Thus, HEIs in the country are functioning in a very competitive environment. The current study presents evidence of the diversity of information sources about universities and factors that drive decision-making on the choice among various universities.

To address the issue of attracting students and making better marketing strategies, the results of the current study suggest focusing on shaping the so-called "Reference group" since most of the applicants' indicated peers as the primary source of information about the university. In addition, universities should focus on traditional and social media and other university marketing strategies such as vocational guidance activities, charity activities, and the organisation of open days for visiting campus.

As for the factors driving students' decision-making, HEIs should consider economic factors such as tuition fees and scholarships. These factors are important for all income class families. Universities should also pay attention to increasing the education quality and performance level of academic staff, affecting the number of university applicants. Besides, there were differences in the factors such as gender, region, family structure and secondary school background of the applicants.

Results suggest that the country's economic development level plays a more critical role in choosing a university than the shared historical background. Further studies focusing on the change of factors affecting applicants' choices over the years are expected. In addition, students' choice by academic achievements would also contribute to the fields. The research also highlights the importance of further studies addressing how to evaluate university reputation in some less developed countries. In addition, in the literature, the effect of the LoI, type of secondary schools, and the family background of applicants on their choice of university was rarely taken into account; thus, the study fills this gap.

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